#### DEPARTMENT OF TRANSPORTATION

### **National Highway Traffic Safety Administration**

# **Petition for Exemption from the**

# Federal Motor Vehicle Theft Prevention Standard;

#### **TOYOTA**

AGENCY: National Highway Traffic Safety Administration,

Department of Transportation (DOT)

**ACTION:** Grant of petition for exemption.

**SUMMARY:** This document grants in full the Toyota Motor North America, Inc.'s, (Toyota) petition for an exemption of the Toyota Highlander vehicle line in accordance with 49 CFR Part 543, Exemption from Vehicle Theft Prevention Standard. This petition is granted because the agency has determined that the antitheft device to be placed on the line as standard equipment is likely to be as effective in reducing and deterring motor vehicle theft as compliance with the parts-marking requirements of the 49 CFR Part 541, Federal Motor Vehicle Theft Prevention Standard (Theft Prevention Standard).

**DATES:** The exemption granted by this notice is effective beginning with the 2015 model year (MY).

**FOR FURTHER INFORMATION CONTACT:** Ms. Deborah Mazyck, International Policy, Fuel Economy and Consumer Programs, NHTSA, W43-443, 1200 New Jersey Avenue, SE, Washington, DC 20590. Ms. Mazyck's phone number is (202) 366 4139. Her fax number is (202) 493-2990.

**SUPPLEMENTAL INFORMATION:** In a petition dated December 12, 2013, Toyota requested an exemption from the parts-marking requirements of the Theft Prevention Standard for the Highlander vehicle line beginning with MY 2015. The petition requested an exemption from parts-marking pursuant to 49 CFR Part 543, Exemption from Vehicle Theft Prevention Standard, based on the installation of an antitheft device as standard equipment for the entire vehicle line.

Under 49 CFR 543.5(a), a manufacturer may petition NHTSA to grant an exemption for one vehicle line per model year. In its petition, Toyota provided a detailed description and diagram of the identity, design, and location of the components of the antitheft device for the Highlander vehicle line. Toyota stated that the MY 2015 Highlander vehicle line will be installed with an engine immobilizer device as standard equipment. Toyota further stated that its Highlander vehicle line will be equipped with either of the three entry systems, a "smart entry and start system", a "conventional key" entry system and a hybrid vehicle "smart entry and start system" for its hybrid vehicle (HV) model. Key components of the normal "smart entry and start" system will include an engine immobilizer, a certification electronic control unit (ECU), engine switch, steering lock ECU, security indicator, door control receiver, electrical key and an electronic control module (ECM). The "conventional key" system components consist of an engine immobilizer, transponder key ECU assembly, transponder key coil, security indicator, ignition key and an (ECM). Key components of the hybrid vehicle "smart entry and start" system will be an engine immobilizer, certification ECU, power switch, steering lock ECU, security indicator, door control receiver, electrical key, power source HV-ECU and an ECM. Toyota also stated that only the upper trim level Highlander models will be equipped with an

audible and visual alarm and there will be position switches installed in the vehicle to protect its hood and doors from unauthorized entry. The position switches will trigger the alarm system when they sense inappropriate opening of the hood. The position switches in the doors will trigger the alarm system when an attempt is made to open any of the doors without the use of a key, a wireless switch or a smart entry system. Additionally, Toyota stated that all of the doors can be locked by using a key, a wireless switch or a smart entry system. Toyota's submission is considered a complete petition as required by 49 CFR 543.7 in that it meets the general requirements contained in §543.5 and the specific content requirements of §543.6.

Toyota stated that its normal "smart entry and start system"- installed system allows the driver to press the engine switch button located on the instrument panel to start the vehicle.

Once the driver pushes the engine switch button, the certification ECU verifies the electrical key. When the key is verified, the certification ECU and steering lock ECU receive confirmation of the valid key, and the certification ECU allows the ECM to start the engine. With the "conventional key' system, once the key is inserted into the key cylinder, the transponder chip in the key sends the key ID codes to the transponder key ECU assembly to verify the code. Once the code has been verified, the immobilizer will allow the ECM to start the engine. With the hybrid vehicle "smart entry and start" system, once the driver/operator pushes the power switch button, the certification ECU verifies the key. Once the key is verified and the certification ECU and steering lock ECU receive confirmation of a valid key, the certification ECU will allow the ECM to start the vehicle.

Toyota stated that with its normal "smart entry and start system," the immobilizer is activated when the engine switch is pushed from the "ON" status to any other ignition status, the

certification ECU performs the calculation of the immobilizer and then the immobilizer signals the ECM to activate the device. For the "conventional key" system, activation of the immobilizer occurs when the ignition key is turned from the "ON" status to any other position and/or the key is removed. For the smart entry and start system for the HV models, the immobilizer is activated when the engine switch is pushed from the "ON" status to any other ignition status, the certification ECU performs the calculation of the immobilizer and then the immobilizer signals the Power Management ECU to activate the device. The device is deactivated in its "smart key-installed systems" when the doors are unlocked and the device recognizes the key code. Deactivation of the "conventional key system" occurs when the door is unlocked and the key is turned to the "ON" position. Toyota also stated that the devices' security indicator will provide the immobilizer status for its Highlander vehicle line. When the immobilizer is activated, the indicator flashes continuously. When the immobilizer is not activated, the indicator is turned off.

In addressing the specific content requirements of §543.6, Toyota provided information on the reliability and durability of its proposed device. To ensure reliability and durability of the device, Toyota conducted tests based on its own specified standards. Toyota provided a detailed list of the tests conducted (i.e., high and low temperature, strength, impact, vibration, electromagnetic interference, etc.). Toyota stated that it believes that its device is reliable and durable because it complied with its own specific design standards and the antitheft device is installed on other vehicle lines for which the agency has granted a parts-marking exemption. Toyota stated that the antitheft device is already installed as standard equipment on its MY 2014 Highlander and has been on the Highlander HV model beginning with its MY 2008 vehicles. Toyota further

stated that it plans to continue to install the device on its MY 2015 Highlander and HV vehicles. The theft rate for the Toyota Highlander vehicle line using an average of three model years' data (MYs 2009 - 2011) is 0.5669, well below the median theft rate of 3.5826. As an additional measure of reliability and durability, Toyota stated that its vehicle key cylinders are covered with casting cases to prevent the key cylinder from easily being broken. Toyota further stated that there are also so many key cylinder combinations and key plates for its gutter keys it would be very difficult to unlock the doors without using a valid key.

Toyota also compared its proposed device to other devices NHTSA has determined to be as effective in reducing and deterring motor vehicle theft as would compliance with the partsmarking requirements (i.e., Toyota Prius and Prius v, Toyota Camry and Corolla, Lexus LS and GS vehicle lines). The Toyota Camry, Corolla, Lexus LS and GS vehicle lines have all been granted parts-marking exemptions by the agency. The theft rates for the Toyota Camry, Corolla, Lexus LS, GS and Prius vehicle lines using an average of three model years' data (2009-2011) are 1.8415, 1.3295, 0.7258, 0.6315 and 0.2675 respectively. Therefore, Toyota has concluded that the antitheft device proposed for its Highlander vehicle line is no less effective than those devices in the lines for which NHTSA has already granted full exemption from the parts-marking requirements. Toyota believes that installing the immobilizer as standard equipment reduces the theft rate and expects the Highlander to experience comparable effectiveness ultimately being more effective than parts-marking labels.

Based on the evidence submitted by Toyota, the agency believes that the antitheft device for the Highlander vehicle line is likely to be as effective in reducing and deterring motor vehicle theft as compliance with the parts-marking requirements of the Theft Prevention Standard (49)

Pursuant to 49 U.S.C. 33106 and 49 CFR 543.7 (b), the agency grants a petition for exemption from the parts-marking requirements of Part 541, either in whole or in part, if it determines that, based upon substantial evidence, the standard equipment antitheft device is likely to be as effective in reducing and deterring motor vehicle theft as compliance with the parts-marking requirements of Part 541. The agency finds that Toyota has provided adequate reasons for its belief that the antitheft device for the Toyota Highlander vehicle line is likely to be as effective in reducing and deterring motor vehicle theft as compliance with the parts-marking requirements of the Theft Prevention Standard (49 CFR Part 541). This conclusion is based on the information Toyota provided about its device.

The agency concludes that the device will provide four of the five types of performance listed in §543.6(a)(3): promoting activation; preventing defeat or circumvention of the device by unauthorized persons; preventing operation of the vehicle by unauthorized entrants; and ensuring the reliability and durability of the device.

For the foregoing reasons, the agency hereby grants in full Toyota's petition for exemption for the Toyota Highlander vehicle line from the parts-marking requirements of 49 CFR Part 541. The agency notes that 49 CFR Part 541, Appendix A-1, identifies those lines that are exempted from the Theft Prevention Standard for a given model year. 49 CFR 543.7(f) contains publication requirements incident to the disposition of all Part 543 petitions. Advanced listing, including the release of future product nameplates, the beginning model year for which the petition is granted and a general description of the antitheft device is necessary in order to notify law enforcement agencies of new vehicle lines exempted from the parts marking

requirements of the Theft Prevention Standard.

If Toyota decides not to use the exemption for this line, it should formally notify the agency. If such a decision is made, the line must be fully marked according to the requirements under 49 CFR 541.5 and 541.6 (marking of major component parts and replacement parts).

NHTSA notes that if Toyota wishes in the future to modify the device on which this exemption is based, the company may have to submit a petition to modify the exemption.

Section 543.7(d) states that a Part 543 exemption applies only to vehicles that belong to a line exempted under this part and equipped with the antitheft device on which the line's exemption is based. Further, section 543.9(c)(2) provides for the submission of petitions "to modify an exemption to permit the use of an antitheft device similar to but differing from the one specified in that exemption."

The agency wishes to minimize the administrative burden that section 543.9(c)(2) could place on exempted vehicle manufacturers and itself. The agency did not intend in drafting Part 543 to require the submission of a modification petition for every change to the components or design of an antitheft device. The significance of many such changes could be *de minimis*. Therefore, NHTSA suggests that if the manufacturer contemplates making any changes, the effects of which might be characterized as *de minimis*, it should consult the agency before preparing and submitting a petition to modify.

Authority: 49 U.S.C. 33106; delegation of authority at 49 CFR 1.50.

Claude H. Harris
Acting Associate Administrator for
Rulemaking

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